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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,735	01/14/2004	Paul J. Garnett	5681-78000	4872
35690	7590	03/21/2006	EXAMINER	
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C. 700 LAVACA, SUITE 800 AUSTIN, TX 78701			LEVI, DAMEON E	
			ART UNIT	PAPER NUMBER
			2841	
DATE MAILED: 03/21/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/757,735

Applicant(s)

GARNETT ET AL.

Examiner

Dameon E. Levi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02/21/2006 (RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 24-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28, 36 and 37 recites the limitation "said connection member" in claims 24 and 34 respectively. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)). Claims 24, 26 and 27-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung et al US Patent 6643137.

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Regarding claim 24, Chung et al discloses an assembly, comprising:

a circuit board(elements 6, Figs 3,4) including an electrically conductive

contact(elements 42, Figs 3,4) coupled to the circuit board;

an electronic component(elements 5, Figs 3,4) coupled to the circuit board;

an electrically conductive shielding portion(elements 41, Figs 3,4) in thermal contact with the electronic component ;a biasing element (elements 436, Figs 3,4) coupled to the electrically conductive shielding portion;

an electrically conductive connection member(elements 43, Figs 3,4) in contact with the biasing element and in electrical communication with the electrically conductive shielding portion; and

wherein the biasing element (elements 436, Figs 3,4) resiliently biases the electrically conductive connection member(elements 43, Figs 3,4) onto the electrically conductive contact (elements 42, Figs 3,4) forming a solder-less detachable electrical connection between the electrically conductive connection member and the electrically conductive contact.

Regarding claim 25, Chung et al discloses wherein a surface of the shielding portion defines a cavity (elements 410, Figs 3,4) for receiving at least one connection member.

Regarding claim 27, Chung et al discloses further comprising a mounting strut(elements 632, Figs 3,4) for mounting the shielding portion on the circuit board.

Regarding claim 28, Chung et al discloses comprising a plurality of said connection members(elements 43, Figs 3,4) arranged to extend along a peripheral edge of the electronic component to form a shielding cage around the electronic component.

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Regarding claim 29, Chung et al discloses further comprising one or more support members(elements 631, Figs 3,4), each support member being attached to at least two connection members.

Regarding claim 30, Chung et al discloses wherein the one or more support members are electrically conductive(elements 631, Figs 3,4).

Regarding claim 31, Chung et al discloses wherein at least one of the electrically conductive shielding portion and said at least one electrically conductive connection member are metal (elements 41,43 Figs 3,4).

Regarding claim 32, Chung et al discloses wherein the biasing element is a spring(elements 436, Figs 3,4).

Regarding claim 33, Chung et al discloses wherein the biasing element comprises at least two parts(elements 436, Figs 3,4).

Regarding claim 34, Chung et al discloses an assembly comprising:

an electrically conductive shielding portion(elements 41, Figs 3,4) mountable in thermal contact with the electronic component(elements 5, Figs 3,4) ;

a biasing element (elements 436, Figs 3,4) coupled to the electrically conductive shielding portion;

an electrically conductive connection member(elements 43, Figs 3,4) in contact with the biasing element and in electrical communication with the electrically conductive shielding portion;

wherein the biasing element(elements 436, Figs 3,4) is configured to resiliently bias the electrically conductive connection member (elements 43, Figs 3,4) onto an

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electrically conductive contact(elements 42, Figs 3,4) on the circuit board (elements 46, Figs 3,4) to form a solder- less detachable electrical connection between the electrically conductive connection member and the electrically conductive contact when the electrically conductive shielding portion is mounted in thermal contact with the electronic component.

Regarding claim 35, Chung et al discloses further comprising an opening (elements 630, Figs 4) in the circuit board in which said connection member is received, an interior surface of the opening being coated with an electrically conductive layer forming said electrically conductive contact.

Regarding claim 36, Chung et al discloses comprising a plurality of said connection members (elements 43, Figs 3,4), each connection member bearing down upon the electrically conductive contact.

Regarding claim 37, Chung et al discloses the circuit board having a plurality of said electrically conductive contacts (elements 42, Figs 3,4), the EM shielding assembly comprising a plurality of said connection members (elements 43, Figs 3,4), each connection member bearing down upon a respective one of the electrically conductive contacts.

Regarding claim 38, Chung et al discloses, wherein the connection member comprises at least two parts(elements 43, Figs 3,4).

Regarding claims 39-41, the methods disclosed therein are deemed as being inherent in the assembly and operation of the claimed assembly, since the prior art of record is

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cited as teaching or suggesting all the elements of the claimed invention. The claims are thus subsequently rejected.

Regarding claim 42, Chung et al discloses an apparatus comprising:

a substrate(elements 6, Figs 3,4), wherein the substrate comprises at least one

electrically conductive contact(elements 42, Figs 3,4),

an integrated circuit(elements 5, Figs 3,4) coupled to the substrate',

an electrically conductive shield(elements 41, Figs 3,4) mountable adjacent the integrated circuit;

a biasing element(elements 436, Figs 3,4) coupled to the electrically conductive shield;

a connection member(elements 42, Figs 3,4) in contact with the biasing element,

wherein the connection member(elements 43, Figs 3,4) is resiliently biased onto the

electrically conductive contact (elements 42, Figs 3,4) by the biasing element(elements

436, Figs 3,4) and wherein the connection member forms a detachable electrical

connection between the electrically conductive shield and the electrically conductive

contact(elements 42,43,436, Figs 3,4).

Regarding claim 43, Chung et al discloses wherein the biasing element is a

spring(elements 436, Figs 3,4) , and wherein the biasing element compresses(elements

436, Figs 3,4) as the connection member is biased onto the electrically conductive contact.

Regarding claim 44, Chung et al discloses an assembly comprising:

a circuit board(elements 6, Figs 3,4) including an electrically conductive

contact(elements 42, Figs 3,4) coupled to the circuit board;

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a substrate (elements 63, Figs 3,4) coupled to the circuit board;  
an electronic component(elements 5, Figs 3,4) coupled to the substrate;  
an electrically conductive shielding portion(elements 41, Figs 3,4) in thermal contact with the electronic component;  
an electrically conductive connection member(elements 43, Figs 3,4), comprising a first piece and a second piece with a biasing element(elements 436, Figs 3,4) between the first piece and the second piece, coupled to the electrically conductive shielding portion through the first piece; and wherein the biasing element (elements 436, Figs 3,4) resiliently biases the first piece and second piece apart to bias the second piece onto the electrically conductive contact(elements 42, Figs 3,4) to form a solder-less detachable electrical connection between the electrically conductive connection member and the electrically conductive contact.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al US Patent 6643137 in view of Wheaton US Patent 5880930.**



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Regarding claim 26, Chung et al discloses instant claimed invention except the shielding portion having a plurality of cooling members extending away therefrom, wherein at least one cooling member accommodates the cavity.

Wheaton discloses an assembly with a shielding portion (elements 100,129, Figs 1-4) having a plurality of cooling members (elements 127, Figs 1-4) extending away therefrom, wherein at least one cooling member accommodates the cavity (see cavities in elements 110, in which elements 111, 112 are contained, Fig 4).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided cooling members in the shielding portion and to have formed a cavity in the cooling member in the manner as taught by Wheaton in the shielding member as taught by Chung et al for the purpose of facilitating direct contact between the cooling fins and the connection member increasing the thermal dissipation performance therein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E. Levi whose telephone number is (571) 272-2105. The examiner can normally be reached on Mon.-Fri. (9:00 - 5:00).

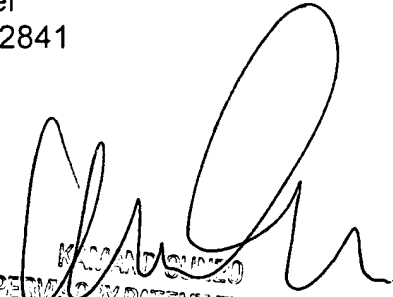
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dameon E Levi  
Examiner  
Art Unit 2841

DEL



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